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# THE FARM INDEX

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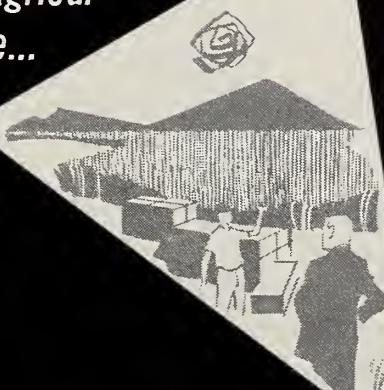
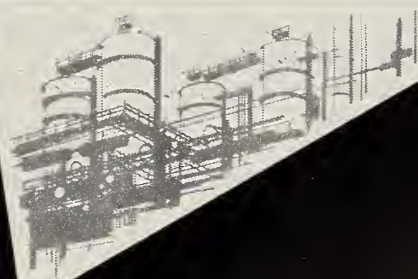
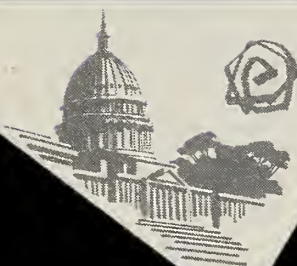
- ★ Rural Development and  
Our Unused Resources
- ★ A Cost Index for  
Retail Foods

FEBRUARY 1963

ECONOMIC RESEARCH SERVICE • U. S. DEPARTMENT OF AGRICULTURE

## USDA AND THE FARMER

*The American Farmer—  
Government—Industry—  
State Colleges. Working  
together, they set off a chain  
reaction that has brought about  
the record achievement  
of U.S. Agriculture...*





# ECONOMIC TRENDS

Item	Unit or base period	'57-'59 Average	1961		1962		
			Year	December	October	November	December
<b>Prices:</b>							
Prices received by farmers	1910-14=100	242	240	240	245	245	242
Crops	1910-14=100	223	226	224	226	227	224
Livestock and products	1910-14=100	258	251	254	261	262	258
Prices paid, interest, taxes and wage rates	1910-14=100	292	302	302	307	307	308
Family living items	1910-14=100	286	291	292	294	295	296
Production items	1910-14=100	262	266	267	271	271	272
Parity ratio		83	79	79	80	80	79
Wholesale prices, all commodities	1957-59=100	.....	100.3	100.4	100.6	100.7	100.4
Commodities other than farm and food	1957-59=100	.....	100.8	100.9	100.7	100.7	100.7
Farm products	1957-59=100	.....	96.0	95.9	98.7	99.3	97.3
Food, processed	1957-59=100	.....	100.7	101.0	101.5	101.3	100.9
Consumer price index, all items	1957-59=100	.....	104.2	104.5	106.0	106.0	.....
Food	1957-59=100	.....	102.6	102.0	104.3	104.1	.....
<b>Farm Food Market Basket:<sup>1</sup></b>							
Retail cost	Dollars	.....	1,060	1,047	1,075	1,069	.....
Farm value	Dollars	.....	406	407	411	412	.....
Farm-retail spread	Dollars	.....	654	640	664	657	.....
Farmers' share of retail cost	Per cent	.....	38	39	38	39	.....
<b>Farm Income:</b>							
Volume of farm marketings	1947-49=100	123	136	146	200	186	147
Cash receipts from farm marketings	Mil. dollars	32,247	35,243	3,245	4,435	4,032	3,100
Crops	Mil. dollars	13,766	15,828	1,691	2,328	2,207	1,600
Livestock and products	Mil. dollars	18,481	19,415	1,554	2,107	1,825	1,500
Realized gross income <sup>2</sup>	Bil. dollars	.....	39.9	.....	.....	.....	41.4
Farm production expenses <sup>2</sup>	Bil. dollars	.....	27.1	.....	.....	.....	27.9
Realized net income <sup>2</sup>	Bil. dollars	.....	12.8	.....	.....	.....	13.5
<b>Agricultural Trade:</b>							
Agricultural exports	Mil. dollars	4,105	5,024	470	389	450	.....
Agricultural imports	Mil. dollars	3,977	3,691	302	333	359	.....
<b>Land Values:</b>							
Average value per acre	1947-49=100	.....	.....	179 <sup>3</sup>	.....	187	.....
Total value of farm real estate	Bil. dollars	.....	.....	134.8 <sup>3</sup>	.....	141.0	.....
<b>Gross National Product<sup>2</sup></b>							
Consumption <sup>2</sup>	Bil. dollars	456.7	518.7	538.6	.....	.....	562.0 <sup>4</sup>
Investment <sup>2</sup>	Bil. dollars	297.3	338.1	346.1	.....	.....	363.5 <sup>4</sup>
Government expenditures <sup>2</sup>	Bil. dollars	65.1	69.3	76.6	.....	.....	75.0 <sup>4</sup>
Net exports <sup>2</sup>	Bil. dollars	92.4	107.4	112.1	.....	.....	121.0 <sup>4</sup>
	Bil. dollars	1.8	4.0	3.8	.....	.....	2.5 <sup>4</sup>
<b>Income and Spending:</b>							
Personal income	Bil. dollars	.....	416.4	430.5	445.6	448.2	450.4
Disposable income <sup>2</sup>	Bil. dollars	321.3	363.6	372.6	.....	.....	389.3 <sup>4</sup>
Total retail sales, seasonally adjusted	Mil. dollars	.....	18,234	18,827	19,744	20,189	20,238
Retail sales of food group, seasonally adjusted	Mil. dollars	.....	4,618	4,631	4,846	4,819	.....
<b>Employment and Wages:</b>							
Total civilian employment, seasonally adjusted	Millions	.....	66.8	66.9	67.9	67.8	68.0
Agricultural, seasonally adjusted	Millions	.....	5.5	5.2	5.0	5.0	4.8
Rate of unemployment, seasonally adjusted	Per cent	.....	6.7	6.0	5.5	5.8	5.6
Workweek in manufacturing, seasonally adjusted	Hours	.....	39.8	40.4	40.1	40.4	40.3
Hourly earnings in manufacturing	Dollars	.....	2.32	2.38	2.40	2.41	2.42
<b>Industrial Production, seasonally adjusted</b>							
Manufacturers' Sales and Inventories:	1957-59=100	.....	110	116	119	120	120
Total sales, seasonally adjusted	Mil. dollars	.....	30,730	32,400	33,480	34,000	.....
Total inventories	Mil. dollars	.....	55,200	55,200	57,270	57,130	.....
Total new orders	Mil. dollars	.....	30,960	32,850	33,820	34,040	.....

<sup>1</sup> Average annual quantities of farm food products based on purchases per wage-earner or clerical-worker family in 1952—estimated monthly.

<sup>2</sup> Annual rates seasonally adjusted fourth quarter. <sup>3</sup> As of November 1.

<sup>4</sup> Preliminary.

Sources: U.S. Department of Agriculture (Farm Income Situation, Market-

ing and Transportation Situation, Agricultural Prices, Foreign Agricultural Economics and Farm Real Estate Market Developments); U.S. Department of Commerce (Industry Survey, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Department of Labor (The Labor Force and Wholesale Price Index).



# THE AGRICULTURAL OUTLOOK

Here's how we see farm output and net income for 1963, so far: Output may top 1962 level a bit, given equally favorable weather . . . increase mostly in livestock. Income . . . little change expected from 1962 level.

Realized net farm income was \$12.9 billion in 1962—up from \$12.8 billion in 1961—largely as result of increased marketings of livestock at higher prices during last quarter. Output and prices received both rose 1 per cent last year.

On demand side: Continuing high level of demand for farm products, with population still rising. Personal income in 1962 . . . up nearly 6 per cent from 1961. Per capita income inching up.

Retail sales set fourth-quarter record . . . sales for year, 7 per cent above 1961. Food expenditures were nearly \$85 billion in 1962 . . . up from \$81 billion a year earlier.

General economy: Growing, but not at capacity. Overall level of business activity in 1962 was 7 per cent above 1961. Industrial output reached record level last year . . . but hasn't increased much in past 6 months. Business investment in

new plant and equipment in 1962 . . . up 9 per cent from 1961 but may be off a little in first quarter of 1963. Employment in 1962 rose 1 million jobs from 1961 . . . rate of unemployment remains around 5.5 per cent of labor force.

## COMMODITY HIGHLIGHTS

**Red meat** production first half of 1963 . . . likely up significantly from year earlier. Meat supply will include more beef and pork—less veal and lamb and mutton. Record supply of fed beef will be available for first half of year. Marketings of **fed cattle** through June may be 8 to 10 per cent more than in comparable period of 1962.

Through spring, slaughter weights of steers and heifers are expected to equal those a year earlier. After spring, heavier. Therefore, per cent gain in number slaughtered in first half will be fully reflected in similar gain in beef production.

Main impact of 5 per cent larger 1962 fall **pig** crop likely will occur this spring. About same number of sows farrowed in June and July 1962 as in these months of 1961. But farrowings in August and September were up 6 per cent from year earlier. Barrow and gilt slaughter during March-June this year likely will be near record level for these months, set in 1944.

**Sheep and lamb** slaughter first quarter this year is expected down substantially from a year ago, when slaughter was high due to liquidation of lambs out of stock sheep inventory. There were 5 per cent fewer sheep and lambs on feed at beginning of this year than last, and larger slaughter of lambs from stock sheep inventory is not expected.

Preliminary data indicate **milk** production in 1962 was record high for second straight year. Production per cow also was record. Total production may continue somewhat above a year earlier during first quarter of 1963.

Prices farmers receive for all wholesale milk during this quarter are likely to run about 15 cents lower than \$4.28 a year earlier.

CCC purchases in calendar 1962 were 10.6 billion pounds of milk equivalent compared with 7.9 billion in 1961. CCC bought 403 million pounds of butterfat and 1,392 million pounds of solids-not-fat, 8.5 and 12.7 per cent of production, respectively, last year. Purchases this quarter are

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expected to be less than the 4.5 billion pounds of milk equivalent bought in January-March 1962.

Commercial stocks of manufactured dairy products at beginning of 1963 . . . probably about 4.2 billion pounds, around a half billion below a year earlier. Slow accumulation of stocks during June-August last year was followed by low seasonal decline during fall.

**Egg** production in early 1963: A little less than a year before because of fewer layers on farms.

Decline in eggs set in recent months will cut **broiler** production of year-earlier level by April. But first-quarter supplies will be up about 8 per cent from same period last year.

Cold-storage holdings of **turkey** on January 1, at 200 million pounds, were second only to year-earlier record of 263 million. Almost half of turkey consumed in January-June comes from storage.

Farmers agreed to divert about 5.2 million acres of **winter wheat** under 1963 program. December crop report indicated 42 million acres seeded. Based on seeded acreage, winter crop of over a billion bushels is in prospect. Extent that harvested acreage will be reduced by farmer signup under program? Not known. Compliance with diversion plans is required for price support eligibility.

Total disappearance of **feed grains** is expected to continue high in 1962-63. During October-December, domestic use was above 1956-60 average, but down a little from record high level in that quarter of 1961. Exports were up about a million tons.

Total stocks of feed grains on January 1 were 5 per cent less than a year before. Carryover into 1963-64 is expected to be down about 15 per cent, giving a two-year reduction of around 25 million tons from record going into 1961-62.

Price supports for 1963 feed grains: Corn, \$1.25 per bushel; oats, 65 cents; barley, 96 cents; and sorghum grain, \$2 per cwt.

**Flaxseed** supply of 36 million bushels for 1962-63 is about a third greater than last year. Crushings for domestic oil use are forecast at about 19 million bushels, same as in 1961-62. Probable exports: about 4 million bushels as flaxseed, 3 million already shipped. Use of 2 to 3 million bushels is expected for seeding 1963 crop, leaving 10-million-bushel carryover next July 1. Flaxseed prices to farmers this marketing year are averaging around \$2.84 a bushel; were \$3.27 last year. Support for 1962 crop is \$2.90 a bushel.

U. S. shorn **wool** production in 1963? Less than a year earlier. This will continue moderate decline in output since 1960. Decreasing production is result of declining sheep and lamb numbers.

Wool prices are expected to remain relatively stable during 1963 marketing season—approximately same as during previous season. Total per-pound return (price plus payment) also will about equal last year's, as incentive level through December 31, 1963, remains at 62 cents per pound, grease basis. This is same as in first eight years of program.

Supplies of most major canned and frozen **vegetables** are ample to heavy. But smaller supplies of fresh vegetables are in prospect for February and March as a result of December and January freeze damage in winter producing areas.

Supplies of both potatoes and sweetpotatoes are large. Holdings of sweetpotatoes are larger than a year ago. January 1 stocks of potatoes, at 118 million cwt., though moderately smaller than a year earlier, were larger than average.

Supplies of fresh **citrus fruit** this winter have been curtailed by severe freezes in all principal citrus areas during January.

In Florida, loss from December freeze was minimized by intensive salvage operations that have contributed to current stocks of canned single-strength citrus juices and frozen orange concentrate well above year-earlier volume.

Subsequent to cold weather, prices for most fresh and processed citrus at all levels of sale have increased.

Year-end stocks of apples, pears, and grapes were larger than on January 1, 1962. Stocks of most canned fruits also were up, but those of frozen fruits were down.

Total supplies of flue-cured and burley **tobaccos**—the major kinds—for 1962-63 are each 4 per cent above previous year and largest since 1957-58. Carryovers of flue-cured and burley at end of current marketing year likely will be moderately larger than at close of 1961-62.

Other kinds of tobacco: 1962-63 supplies of Maryland, Pennsylvania, Ohio cigar filler larger than a year earlier; fire-cured, dark air-cured, Connecticut Valley binder and cigar-wrapper types smaller. Supplies of Wisconsin binder are almost same as in 1961-62.



*When  
they began...*

1862 |



USDA & Land Grant Colleges

1871 |



Systematic Study of Plant Diseases

1884 |



Meat Inspection

1887 |



Experiment Stations for Every State

1891 |



National Forests

1914 |



Cooperative Extension Work

1915 |



Market Regulation

1916 |



Federal Loans to Farmers

1921 |



Expanded Economic Research

1925 |



Better Nutrition for the Nation

1933 |



Soil-Saving Programs

1935 |



Rural Electric Power

41-53 |



Food for War—and Postwar Relief

1954 |



More Food Aid for Self-help Abroad

1961 |



Programs for Stronger Rural Economy

## USDA AND THE FARMER: 100 YEARS OF SERVICE

*"It takes so few of us to provide food, clothing and shelter for the rest of us that the rest of us can provide the best national defense and the highest standard of living for all of us . . ."*—Jamie L. Whitten, Representative, U. S. Congress, as quoted in *Century of Service*.

The American farmer and the U.S. Department of Agriculture have just finished writing a monumental chapter in world history.

Working closely together since the Department was founded back in 1862, they have developed a productive farm capacity beyond the dreams of men a hundred years ago. And together they have supplied the American public with an abundance of food and fiber at reasonable prices, making us one of the best fed, best dressed nations in the world.

The Department's role in this

epoch-making record is told in *Century of Service—The First 100 Years of the United States Department of Agriculture*. The 550-page history, soon to be published, coincides with the end of USDA's centennial year.

The history points out that today the American farmer is the world's greatest production expert. It was not always so. Agriculture in Washington's time had changed little from the small subsistence farming of the early settlers. Seeing the need for organized assistance, Washington urged the creation of a national board of agriculture in his last annual message to Congress.

Other national leaders tried to upgrade agriculture. Jefferson brought back upland rice seeds from Italy. In 1819 the Secretary of the Treasury asked U.S. consuls stationed around the world to send back new plants or superior

varieties of old ones. In 1839 Congress appropriated \$1000 of Patent Office funds for the collection of agricultural statistics, a service that today keeps agricultural interests, both here and abroad, abreast of the nation's farm production costs and returns.

Public interest in a government agency devoted to agriculture and the rural economy mounted year by year. Then civil war struck. Despite the nation's uncertain future, Congress early in 1862 passed an act to establish "at the seat of Government of the United States a Department of Agriculture."

On May 15, while news of troop losses and retreat filtered into Washington from the Peninsula Campaign, the act was signed into law by a man of vision: A. Lincoln.

In the 100 years since, USDA



research has led to better crops and livestock, as well as fertilizers, farm machinery, pesticides and other elements needed for production. The Department's economic research has shown farmers how to combine these scientific advances for profit and greater efficiency.

Statistical work has helped farmers decide what crops to plant and when to plant them. Work with farm cooperatives has aided in solving the problems of farm supply and marketing. USDA's foreign promotion efforts have assisted farmers in finding more markets for their products abroad.

And these are only a few of the many services to American agriculture traced from their small beginnings in *Century of Service*.

Under the agricultural adjustment acts of the 1930s, USDA began to provide such direct assistance to farmers as commodity credit and crop insurance. Other actions of the period included farm ownership loans, soil conservation, and rural electrification.

The accumulation of new functions, with economic programs reaching directly to the farmer,

transformed the USDA from one of the world's greatest research and educational institutions into an agency also responsible for major action programs directly affecting the economic life of the nation and of individual farmers.

The American farmer and the Department were prepared in 1941, when Japan attacked the United States, to supply the food and fiber needed to help "win the war and write the peace."

During the war, USDA among other things sponsored the victory garden program, helped farmers get labor and supplies, and developed new techniques to preserve food shipped to our armies and allies.

The new history points out that the American farmer, in becoming the proficient farm manager he is today, has had some formidable allies outside the Department of Agriculture.

State agricultural colleges, through their experiment stations and extension services, have helped him adapt new technology and new varieties of crops to meet his own needs.

State agricultural departments have also helped immeasurably.

So have the national farm organizations.

Private industry also has played a notable part. Farm machinery manufacturers, fertilizer producers and the chemical industry have tailored their products to meet his ever-changing requirements. And processors of food and fiber have repeatedly come up with new ways for him to market his products.

As USDA enters its second century, American agriculture, like American industry, still faces problems. The farmer is producing more of some foods than we can eat in this country or ship to overseas markets. We need to do more to conserve our vital agricultural resources—land, forests and watersheds. In addition, more nonfarm jobs are needed for farm and other rural people uprooted by the continuing technological revolution in agriculture.

But as *Century of Service* shows, a strong and vigorous agriculture in this growing economy of ours is a national resource of inestimable value. How we go about solving our problems now will shape the course of U.S. agriculture in the next 100 years.

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### *The Lighter Side of the Century*

J. Sterling Morton, who became Secretary of Agriculture in 1893, wanted to reduce the Department's costs for a newfangled instrument—the telephone. He installed a private system within the Department and had only one telephone connected with the city system. Most other instruments were set up in hallways, and it was here that day-to-day business by phone was carried on.

---

Secretary "Tama Jim" Wilson frowned on the automobile. Finally, in 1912, he approved the purchase of a single automobile for the Beltsville experimental farm outside Washington—but only with the understanding that it was not to become a precedent for buying more.

A dairy farmer in Kentucky wrote recently about how he remembers the day in the late 1930s when the Rural Electrification Program brought lights to his family's home:

"It was late on a November afternoon, just before dark. All we had was wires hanging down from the ceiling in every room, with bare bulbs on the end.

"Dad turned on the one in the kitchen first and he just stood there, holding onto the pull-chain. He said to me, Carl, come here and hang onto this so I can turn on the light in the sitting room!

"I knew he didn't have to do that and I told him to stop it, that it would stay on. He finally let go, and then looked kind of foolish."

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## Effects of Weather on Yields Accounted for in New Indexes; Adjusted Agricultural Output Reflects Changing Technology

Weather can create problems for economists and production specialists as well as farmers. It's always difficult and sometimes impossible for the specialists to tell how much of the year-to-year change in crop yields is due to weather and how much to technology.

Economists would like to be able to adjust data on agricultural output for weather effects in order to get an exact measure of the effects of technology. Specialists in ERS recently completed a pilot study in which they constructed weather indexes to make such adjustments.

Corn yields in Iowa from 1929 to 1960 were used in the study.

Variation in experimental yields was used as a measure of weather. Actual yields each year were divided by a composite weather index that accounts for the effect on yield of meteorological and closely associated factors. The indexes measure the net effect on yield of things like rainfall, temperature, length of day and light intensity. In addition, insects and disease epidemics closely related to meteorological conditions are considered.

Once the series of deflated corn yields was completed and compared to the actual yields, the year-to-year fluctuations due to weather became apparent. For example, 1936 was a year of very unfavorable weather for corn in Iowa. The average yield was about 17.7 bushels per harvested acre. The weather index indicated the yield farmers would have had under normal weather conditions was roughly 39.5 bushels.

The adjusted figures further revealed that improved technology had increased yields in two steps during the 30-year period. Yields from 1929 to 1935 were relatively stable. Nearly all farmers were

still planting open-pollinated corn during this period. With the adoption of hybrid corn, yields in the mid-30s increased rapidly until the early 1940s, when all corn acreage was planted with hybrid seed.

About 1954, a second increase in Iowa corn yields began. This time the higher yields were mainly the result of such improvements as use of more fertilizer and planting more kernels per acre. The Iowa study also indicated that while technology has helped farmers to offset bad weather, it has not helped them to exploit good weather.

Although the weather indexes in the pilot study were set up for only one crop in one state, the same methods can be used to make indexes for all crops and all regions in the U.S. They can serve to analyze changes both in total production and production per acre.

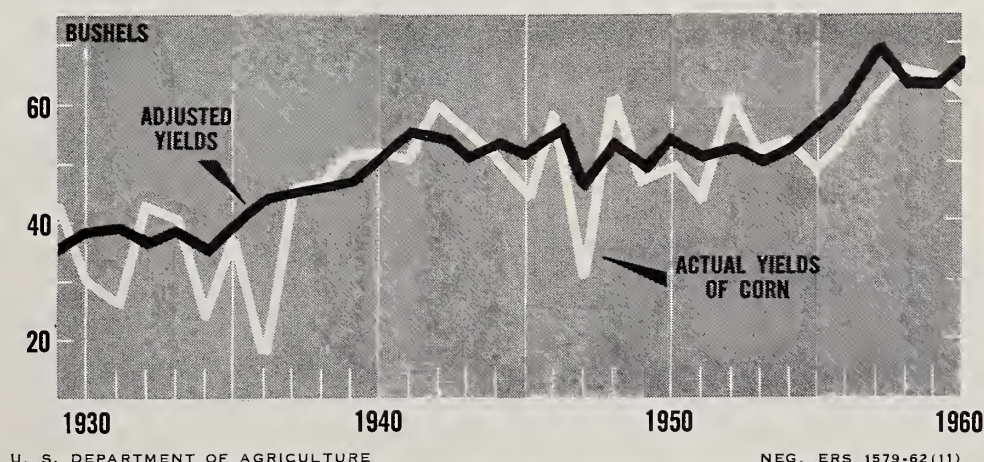
In addition to separating the influence of weather and tech-

• • • • •  
 • **Farm Accidents** •  
 • Eighty per cent of all farm •  
 • accidents are due to carelessness. •  
 • In the course of a year, nearly •  
 • one-third of the farm population •  
 • is involved in accidents, about •  
 • 20 per cent of which mean time •  
 • lost from work, nearly 3 per •  
 • cent resulting in permanent •  
 • disabilities. •  
 • Most of the accidents on the •  
 • farm involve machinery. Off the •  
 • farm, cars or trucks are the •  
 • agents. Falls lead the dishonor •  
 • roll of accidents in the rural •  
 • home, as they do in the city. •  
 • • • • •

nology on agricultural output, the indexes have by-product benefits. For example, researchers could use such indexes in exploring the "why" of weather—the cause and effect relationship of the separate meteorological factors. More knowledge in this area could help farmers adapt their production practices to their environment.

Weather indexes could also be used to compare the year-to-year variation in weather conditions and climate for various crops and regions. This would help in projecting future production levels.

**WEATHER OR NOT?** Who gets the credit for a bumper crop? Man or Nature? The adjusted yields of corn per harvested acre in Iowa tell us what would have happened in a given year had the mixture of sunny days and rain, cold and heat approximated the prevailing climate for the area. In 1948, for example, the weather was better than average and so as a result were yields. The adjusted yields give the farmer an idea of how much credit technology gets for improved yields, and how much is merely the result of good luck with the weather.



U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 1579-62 (11)



## Laws Governing Use of Water Vague in East Coast States; Claims Against Resources Frequently Left up to the Courts

The laws governing the use of water in the East are as varied as the sources of water they control. Although there is considerable water legislation on the books, court rulings provide the primary basis for determining water rights.

Rights to water supplies vary according to the way in which the court has classified them. Water classifications include natural watercourses, diffused surface water, percolating ground water and underground streams.

The most common legal concept for water rights is the riparian doctrine. It provides that the owner of the land that adjoins a natural watercourse has the right, within reasonable bounds, to use water for household needs including watering a garden and watering livestock kept for home use.

The reasonable-use idea in the riparian doctrine tends to make rights uncertain in several eastern states. This may create problems in making improvements such as multipurpose dams.

Another common type of water law in the eastern states is the English or absolute ownership rule. This permits each landowner to withdraw all the water he can obtain from wells on his land and use or sell it for almost any purpose, regardless of the effect on his neighbors' supply. This rule favors municipalities and large industries that can afford to drill deep wells. Often they cut off the

water supply to shallow wells in the same area.

Several states have specific legislation controlling the construction, improvement, or repair of dams. Many of these statutes are designed mainly to require permits issued by state or local governments to enforce construction standards and safeguard public health and safety. Some also regulate rights to navigation, fish passage and other public interests in connection with water held behind dams.

A number of states have gone one step further and have a system of water-use permits usually administered by a state agency. Such permits are obtained to use water for specific purposes such as irrigation, although previously existing uses are often exempt.

In Minnesota, the commissioner of conservation issues water-use permits for everything from building farm ponds to industrial purposes. The commissioner also has the authority to cancel permits "at any time deemed necessary" and "for any cause for the protection of public interests."

Many state agencies go beyond regulating water use and engage in water resource development. This may include: gathering and supplying data on water sources and uses; providing technical assistance to private efforts toward water resource improvement; and financing, constructing, operating and maintaining dams or other facilities.

Some states, such as New Jersey, Indiana and Florida, have more of a hands-off policy on water rights. Statutes in these states provide for regulation by a state agency only when there is conflict over competing uses.

Although the 31 eastern states have generous water supplies, they also contain three-fourths of

the U.S. population. The increase in numbers of people and their expanding individual needs for water indicate more controversy over water rights in the future.

Existing water laws may be clarified or modified by courts and administrative agencies eventually, but additional legislation will be needed to cope with problems of water development and use as they occur. It is also likely that more attention will be given to integrated long-term planning, development and management of water resources within certain watersheds, river basins or ground water areas.

## Balance of Investment and Skill Is Key to Efficient Farm Size

How big is big? Even more to the point—How is size related to efficiency? Farm economists say that efficiency is related to the size of the farm, the level of investment in plant and equipment and not least important, the farmer's ability as a manager.

How big, for example, should a dairy herd be? Turn the question around, says a specialist in a leading dairy state. He recommends that dairymen get cows of high inherent productive capacity, establish a good feeding program, and then handle as many cows as is economical.

Another specialist suggests that the most profitable size for a dairy herd is the size that best fits the pasture and forage produced on a particular farm. The herd may be 10 or 300 cows. Labor and plant facilities, he points out, can be adjusted to herd size with little increase in unit cost.

Management ability may also be the measure for scale of operation. One man may be able to handle 300 cows and keep a crew of men operating at peak efficiency. His neighbor may be just as good as a herdsman, but not be able to direct even one hired man for efficient production.

### Skills in Use

A check of skills used by male workers doing 25 days of farm-work or more in 1961 revealed about half had spent at least a month working with machinery. Thirty per cent reported driving a truck or tractor.



*Economic research in rural development  
takes a look at specific causes of underemployment  
and suggests ways to raise incomes*

## Institutions Can Be Roadblocks In Path of Rural Development

Why don't farm people in low-income areas move to town and earn more money? Why don't they insist their children stay in school for the education so necessary for advancement?

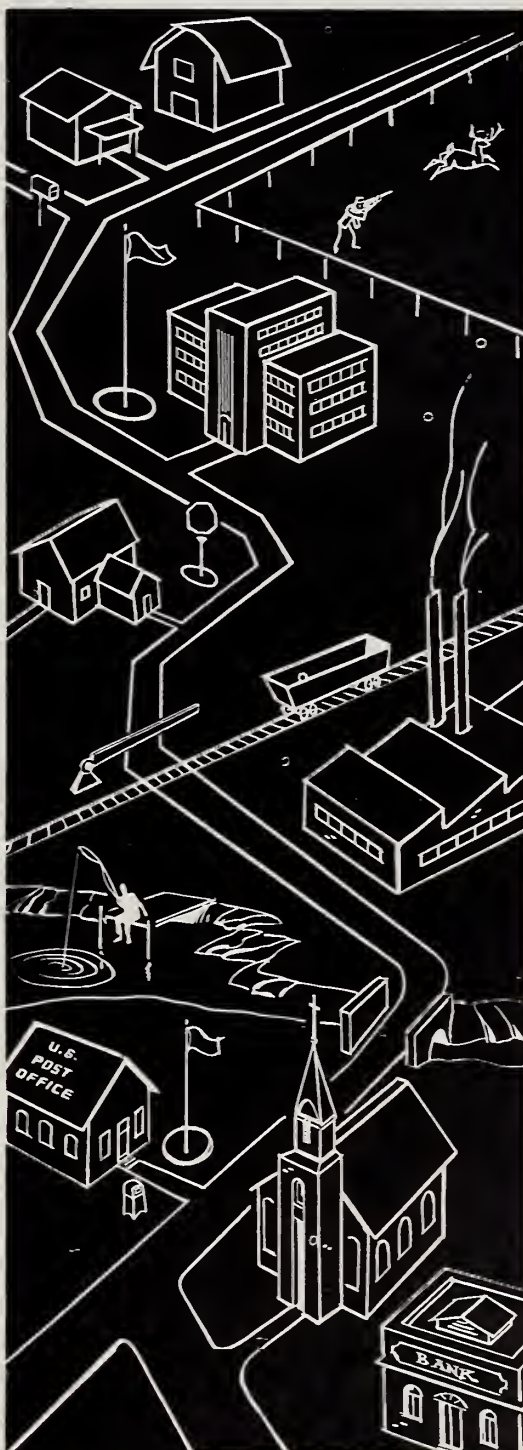
Economists interested in rural areas development are trying to find answers to these questions.

Part of the answer is in the community's prevailing institutions and in the values and aspirations of the residents. Together these things can help or hinder change in the community.

For instance, many of the unemployed can't find jobs because of insufficient education and lack of trade skills. Low levels of education and job training are due to poor schools and failure to use the schools that are available.

Schools are frequently inadequate because many residents of rural areas don't value education enough to vote for increased taxes or encourage their children to stay in school. Because they themselves lack education they often are unemployed and don't have the money to pay for taxes to improve schools.

Low income and lack of migration need study in terms of the local attitudes and institutions.



## Use of Farmland Could Provide Space Needed for Recreation

Americans are long on time and money but increasingly short on outdoor recreation areas where they can spend their leisure.

The lack of adequate open space shows up most clearly in the densely populated Northeast, where more than 25 per cent of the nation's population is concentrated in the Boston to Wilmington megalopolis.

One way to relieve the mounting pressure on public recreation areas is a greater use of private lands, especially farmland. More farmland is being taken out of crop acreage.

But, a recent Economic Research Service study of lands available for recreation shows that there isn't very much public land left for use on the crowded eastern seaboard.

In the 10 northeastern states, the amount of land in crops and pasture dropped by 2.5 million acres between 1950 and 1959. Nearly half of this acreage was turned into private forests and woodland. Some could be state-acquired by purchase, lease or co-operative agreement and run as private game preserves. Other parcels could be privately developed for profit. (Cont., p. 10.)

# RAD PROBES WIDE RANGE OF PROBLEMS



The region includes the six New England states along with New York, New Jersey, Pennsylvania and Delaware.

Before this former cropland can be used by owners for recreation developments, several problems may have to be solved.

The most important is money. It's no easy task for a farmer to turn his land into a resort. Local banks are not eager to provide loans on untried enterprises. Even if the farmer does get his loan, the interest rate is apt to be fairly high.

Building laws, health codes and zoning restrictions, hunting and fishing regulations as well as state fees and licensing are, on occasion, other obstacles to the development of small recreation sites. By and large these state tariffs are pegged to the established, full-time resort.

On the brighter side, many farmers can add to income, at low cost, from hunting, fishing and camping fees. Also, many states are beginning to encourage private enterprise in overall recreation planning.

New York State, for example, works with local groups of landowners, sportsmen and county fish-and-wildlife officials to develop area-wide programs for outdoor recreation. The flexibility of the New York program makes it possible to tailor activities to the needs of an area.

In some parts of the state, agreements are made with several owners of adjacent property so that the land can be managed as one large hunting preserve. For the landowner who opens private holdings and follows certain conservation practices, there is provision for technical assistance, planting stock and cooperative policing.

Cooperation such as this between state governments and farmers or other landowners will go a long way toward solving the problem of our crowded open spaces.

## **Rural Communities Are Often Bypassed by New Industry Because Needed Facilities Are Inadequate or Nonexistent**

The hard fact of rural areas development is that many industries stay in the city because rural communities too often can't—and sometimes won't—offer attractions necessary for business.

When an industrial firm goes shopping for a new location, one thing it always looks for is labor—skilled labor—the item rural communities often lack. By occupational definition, most farmers and small-town residents haven't the necessary vocational training or experience for highly skilled nonfarm jobs.

Management is understandably less interested in a location which would cause it to bring in most of its labor force from already established plants. Should the plant move in anyway, there will be few positions left over for the local people. Chances are the available jobs will be low-wage chores.

Rural communities are also at a disadvantage because they lack

facilities, both for the plant and for the core of personnel that generally come in with it. Industry looks for adequate utilities—water supplies, transportation, power and fuel. A good building site is important too, and all these things must be available at reasonable prices. The employees that accompany the plant want the housing, shops, churches, hospitals, schools and community activities they have been accustomed to in other locations.

Despite the problems, rural development commissions have had some success in getting industries to come into rural areas. The stimulus of new jobs and new residents in such communities is in turn, a boost for local retail business and other small firms. Secondary firms spring up and provide beneficial side-effects because they also are able to hire more people and add to the community payroll.

## **JOB RETRAINING PLAN WILL GIVE FARMERS NEW SKILLS**

Underemployment can now be equated with unemployment for some official purposes. Rules favoring industrial and clerical training of farmers became law early this year. The Manpower Development and Training Act (PL 97-415, March 1962) defines unemployed farmers as those whose basic annual family income is less than \$1,200. These are completely new concepts for assisting workers of limited or outmoded skills.

The retraining benefits of the Act apply not only to farm families, but to all Americans who, within the limits of the Act, are unemployed or underemployed.

And underemployment, according to labor statisticians, excludes people who are out of work or not

in the labor force, and who, though willing to work, are not seeking jobs.

In addition to the family income factor, a candidate for training must be: willing and able to work a fuller schedule and, if necessary, willing to move to another town. The Act also applies to single persons, 16 to 22 years old, even without a gainful work history.

A head of a family with a history of gainful employment and a net income of less than \$1200 is eligible for an allowance during his training period. The amount generally equals state unemployment compensation. Youths from 19 to 22 years of age may receive training allowances not to exceed \$20 per week.



# DISPLAY COSTS FITTED TO PROFIT PICTURE

What the shopper doesn't see in today's self-service food stores, the shopper doesn't buy. But with over 5,000 items crowding the shelves the store manager has to calculate the amount of display space needed to sell the merchandise. The extra inches that may not be needed are sheer waste of sales-producing space.

The problem of proper space allocation is especially acute in the frozen food department where expensive display fixtures run up the costs.

A recent check of 256 frozen food items in one store shows what happens to sales when display space has been badly allocated.

In a two week period twenty-five items didn't sell at all. Over 100 more didn't earn enough to pay for the space they occupied.

Under the circumstances, it isn't too surprising that frozen food departments are frequently noted for low profits.

A gauge to measure the item-by-item contribution to net profit has been developed by economists in the Economic Research Service. The cost of display space chargeable to each item in the cabinet was worked out with cost accounting studies. Handling costs were

obtained through time studies and put in the form of an index. This index measures relative differences in the amount of labor needed to move various frozen food items through the store.

Cost figures for frozen dinners in the test store provide an idea of how the system works.

The cost of display space for frozen dinners was \$2.00 per week per square foot. Frozen dinners took up 12 square feet. Display costs, thus, were \$24 per week.

Handling a case of frozen dinners cost 9 cents (the average cost of handling a case of frozen food, 10 cents, multiplied by the labor cost index for frozen dinners of 92 per cent).

The profit-contribution formula can then be put to work with the help of these two assumptions: (1) sales of 20 cases of frozen dinners in a week for a total of \$132; and (2) an original cost for the 20 cases of \$99.

It figured out to \$99 plus \$24, the display cost, plus \$1.80, the labor cost, for a total cost of \$124.80 for the 20 cases of frozen dinners. Their contribution to net profit was \$7.20 for the week, or about 5 per cent of sales.

By changing the amount of space devoted to all frozen foods in a number of test stores it was found that a 20 per cent increase resulted in a 2.5 per cent increase in sales. But a 20 per cent reduction in total space cut sales by over 12 per cent. These figures indicate only that the stores were using about the right amount of total display space.

The problem for the manager, then, is to dole out the right amount of space to individual products.

There are, of course, a number of items that have to be stocked, even though they add nothing to net profit. But even though the manager can't get rid of them, he can at least cut the amount of space they occupy—and his loss to a minimum.

## LABOR COST INDEX

(Based on sales mix for one store)

Commodity	Labor index	Handling cost
		Cents
Average handling cost by case	100	9.0
6-pack items, bakery	90	8.1
12-pack poly bags	105	9.4
12-pack pizza	100	9.0
12-pack—all other frozen dinners	92	8.4
24-pack cans	105	9.4
24-pack poly bags	140	12.6
24-pack—all other	105	9.4
48-pack cans—6-pack	92	8.4
48-pack cans—dump display	92	8.4
48-pack cans—no price mark	100	9.0
48-pack cans—dump no price	65	5.8
48-pack cans—all others	140	12.6

**INDEX FIGURES** for direct costs provide managers with a key to profit contribution of selected foods. The direct cost index is based on time study data for handling frozen foods, from unloading the truck to stocking the cabinet



Plastic Laminates May Help Cotton Increase Sales in Industrial Market

Plastic laminates are a not-often noticed industrial market for cotton: but here cotton shows a small but perceptible increase. This growing outlet for cotton can give an important boost to the total industrial market for cotton.

High-pressure and flexible plastic laminates use only one half of one per cent of U.S. cotton production— about 71,000 bales in 1960 compared to the total crop for the year of 14 million bales.

The most important use for cotton in this field, at the moment, is as the fabric content in high-pressure laminates, made by joining fabric with thermoset resins under heat and pressure. These laminates used up 58,000 bales of cotton in 1960.

The rigid, strong high-pressure laminates are used in a variety of industrial products ranging from store fronts and counter tops to machine parts and space missiles.

A recent publicized use of cotton in high-pressure laminates was in the propeller shaft bearings for the nuclear ship *Savannah*.

However, the competition with paper and fiberglass as the fabric content of these laminates makes it unlikely that cotton will gain much more ground in this particular market.

Flexible laminates, on the other hand, may have a more promising future. The flexible laminates lean more heavily on fabric content, rather than the plastic itself, for desired end-product qualities.

Combining waterproof cotton fabric and plastic foam into a flexible laminate makes for a warm, light-weight textile that is finding wide acceptance in storm clothes and rainwear. Rayon and paper fabrics have not yet been bonded satisfactorily to a foam. Cotton-urethane foam combina-

tions are also gaining uses as resilient, inexpensive upholstery padding.

With a 30 per cent increase expected in the production of flexible laminates between the years 1960 and 1965, cotton producers and manufacturers might well profit from further research on new product development in this area.

Newer Standards and Blends May Sell More Hard Winter Wheat to Europe

There's a chance we can sell more of our hard winter wheat in Europe if we remember some of the peculiarities of the market. For instance:

- Since European wheat is characteristically soft and low in gluten, the bakers rely on imports to bolster the protein content of their bread.
- European bakers seem to prefer our hard spring over the winter wheat because they feel the protein content is more consistent and the baking quality is higher. As a result, hard winter wheat is looked upon mainly as filler. It's bought mostly when the price is lower than the spring variety.
- These problems are not the only ones that can limit expanding our foreign markets for hard winter wheat. It would be useful to examine, too, other aspects of our foreign grain trade such as our methods of measuring, grading and blending and their probable effect on foreign markets for American hard winter wheat.

• • • • •	<b>Wages Rise</b>	•
•		•
•	Hourly earnings of employees	•
•	in food marketing firms aver-	•
•	aged \$2.08 in August 1962, up	•
•	6 cents from the same time a	•
•	year earlier.	•
•	Since 1950, increases in hourly	•
•	earnings from one calendar year	•
•	to another have averaged about	•
•	7.5 cents in food firms.	•
• • • • •		•

Flowers Act as Own Promotion For \$600 Million Sales a Year

Flowers and floral products add grace to our lives and about 600 million dollars a year to the nation's floral industry. The pretty blossoms and plants do it largely by themselves, with little attempt by the industry to get out and promote sales.

A preliminary survey of florists in selected markets suggests that much could be done to increase the sales of flowers at the retail level.

Most of the possibilities have to do with getting the customer into the store, where the chance of more impulse purchases begins.

As the survey pointed out, 50 to 90 per cent of all sales were made over the phone.

The customer is pretty much left to create his own desire to buy flowers or potted plants.

The survey came up with a few indications of how merchandising could be improved.

- Store location—Florists are conspicuous by their absence from the newer suburban shopping centers, where an increasing percentage of retail sales takes place.
- Store layout and fixtures—About a fourth of the florists surveyed said they hadn't altered their stores significantly within the past two decades. Close to 90 per cent of the florists had never done a major overhaul on their stores for fixtures.
- Customer services—Almost all the florists in the survey offered delivery, credit, and wire service, with prices the same whether the order was delivered or bought in the store. Lower prices for cash-and-carry store purchases could help to bring customers into the shop and increase the chance for impulse sales. Also, some 40 per cent of the stores gave customers advice on how to use flowers, but only when asked. Actively promoting such consultation services could help to boost sales.



## Food-Short Countries Need More Capital Invested in Agriculture; More Crop Research and Farmer Training to Raise Production

"The farmer clears some land with his machete, digs some holes into which he drops a few seeds, chops the weeds to give plants a chance to grow, and harvests some food crops. The chief capital item is the machete."

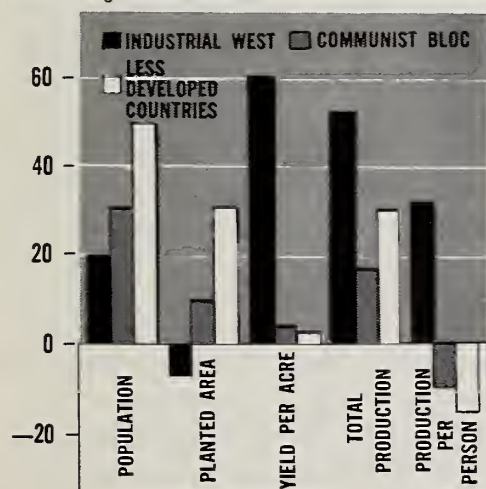
That's the way a recent visitor from Ghana describes farming in many parts of his country.

Ghana is by no means an isolated case. Capital investment is little more than a machete in many parts of the underdeveloped world.

Lack of training and lack of capital are the big reasons why these countries remain undernourished, according to recent ERS reports. As recently as 1959, for example, the underdeveloped world produced only 372 pounds per person of cereal grains, mainstay of the diet, while the industrialized West produced 1166 pounds per person.

### UNDERDEVELOPED WORLD STILL SHORT OF CEREALS

Per cent change 1935-39 to 1959



Most emerging countries don't have the money, technical knowledge or equipment to raise output to needed levels. Even with more acres planted, and total output up, production per person has actually declined in the underdeveloped world in the last 20 years or so.

USDA

Neg. ERS 1521-62(10)

The problems are obvious enough. Underdeveloped countries aren't using enough chemical fertilizers. They need higher yielding crop varieties. Their livestock breeds are barely developed. They lack weed and pest control and improved farm implements.

Finding ways to obtain these vital inputs is something else again. Annual per capita income is \$235 in Latin America; in Africa and West Asia, \$137; in the Far East, \$73, not counting Japan.

Food aid from the United States and other developed nations will help these countries, but this is only a stopgap.

In the long run, food-short countries will have to increase their own crop and livestock production either by planting more acreage or by raising yields.

Most of the needed increase in food production will have to come from existing acreage, particularly in the Far East where unused land is scarce. Soils depleted by centuries of use will need massive injections of chemical fertilizer. But they can be revitalized. Japan, for instance, jumped yields enormously in recent years with heavy applications of chemical fertilizer.

High-yield seeds and farm management programs suited to the climate, terrain, and labor of undeveloped countries must also be developed through research.

The success story of Holambra, Brazil, shows how well planned capital investment pays off. Dutch and Brazilian settlers operate some 150 farms here, each with a relatively high capital investment of about \$15,000. The costs are offset by greatly increased yields. Corn for example, averages 112 to 128 bushels per acre compared with 24 to 32 bushels in the surrounding area.

### South African Surplus

Tripled corn production over the last decade has brought the Republic of South Africa a vast surplus. Production has risen to 6.1 million short tons enabling that country to be the world's second largest corn exporter.

To learn how the U.S. handles vast supplies of grain, South African officials recently spent six weeks in Washington, USDA field offices and feed industry centers. Their study covered methods of storage and marketing as well as alternative uses of feed grains and by-products.

### Nigeria Lifts Living Standard; Food Imports Expected to Rise

Despite an adverse balance of trade, a lack of capital goods, and the growing pains of modern industrial development, the most populous country in Africa, Nigeria, is slowly raising its standard of living.

Per capita income is now growing about 1 per cent a year. By 1975 it probably won't quite reach \$100. Yet, if progress is slow in Nigeria, it is real. Food imports in 1960 were at \$90 million a year, or 10 per cent of total imports. Wheat imports are expected to double by 1975.

Wheat and flour are about 13 per cent of food imports—about four-fifths of these are from the United States.

Another significant import from the U.S. is unmanufactured tobacco, taking about \$3 million in 1960.

But the domestic crop, which gained about 20 per cent from 1950-54 to 1960, has replaced some imports.

Nigeria has had an unfavorable balance of trade since 1955. In 1960, total imports value exceeded exports by \$150 million. Its imports and economic expansion will depend on its ability to increase farm commodity exports.



## 1962's Market Basket of Farm Food up from 1961 Level; Meat and Poultry Prices Result in Biggest Increases

The cost of the annual market basket of farm-originated food changed little from October to November last year according to the most recent survey of prices. However, the November figure was 2 per cent above a year earlier.

In November last year, the annual average cost of the market basket was \$1,070, some \$5 less than it was the month before, but \$24 more than a year earlier.

The market basket, as a measure of retail food prices, is based on average quantities of farm food products bought by a moderate income family in 1952. It doesn't include seafood or such imports as coffee and tea. Nor does it allow for increased quantities of food in the family budget or better quality diets.

The overall increase for the year, however, may be much smaller than 2 per cent. Food

store prices for farm foods ran about 1 per cent higher in the third quarter of 1962 than they were a year earlier, and for the first three quarters they averaged out to about the same as 1961.

The higher rate in November, compared with a year earlier, was largely due to higher prices for beef and to a lesser degree, pork, veal and lamb. Frying chickens, fruits and vegetables, and cereals also carried higher price tags in November, compared with a year earlier. Easing the food budget a little, the bill for dairy products and fats and oils dropped a little.

The retail and farm prices of beef increased in every quarter of 1962 except one, despite slightly

larger supplies. More people with more money to spend helped to push up prices.

The higher prices for fryers at the retail store in November reflected, in large part, smaller per capita supplies, compared with a year earlier.

About 38 cents of the dollar we spent for farm foods at the retail store last year got back to the farmer.

Charges for processing domestic farm foods have run about a third of total marketing costs in the past few years. Any change in the productivity of food manufacturing firms is apt to show up in the retail food bill.

Fortunately, workers in the food marketing industries have been turning out more food with less labor for the past several years.

## FEDERAL STAMP PLAN HELPS INCREASE FOOD PURCHASES

Families using the U.S. Department of Agriculture's Pilot Food Stamp Program are buying more food, and they are buying it at the same place.

That's the report of recent studies of the program in Detroit and in rural parts of Fayette County, Penn. The survey was made in September and October, 1961.

The study in Detroit showed that the value of food consumed by participating families increased in all major food categories except one, eggs.

In Fayette County, the result was somewhat mixed. The value of purchases increased for fruits and vegetables, dairy products (except butter) and bakery products. Meat consumption was up only slightly.

Some two-thirds of the rural participants went to independent food stores before the plan, and over half the city families shopped at chains. The percentages were about the same after the stamp plan started.

Families traveled just about as far to buy their food once the plan went into effect, too, with little change in distance to market.

The stamp plan did have some effect on frequency of purchase and the use of credit. Both city and country families who shopped once a week or so before the stamp plan, tended to go to the store more often after the plan started.

About 20 per cent of the needy families in rural parts of Fayette County and about 5 per cent in Detroit had been using credit at their food stores. After the stamp plan went into effect, these percentages dropped considerably.

The Pilot Food Stamp Program was established in mid-1961 in: Franklin County, Ill.; Floyd County, Ky.; Detroit, Mich.; the Virginia-Hibbing-Nashwauk area of Minnesota; Silver Bow County, Mont.; San Miguel County, N. Mex.; Fayette County, Penn.; and McDowell County, W. Va. The program is administered by the Agricultural Marketing Service.

### Calorie Countdown

In 1962, as in 1961, two food groups supplied the average American with over 40 per cent of his calories. These were flour and cereal products, 21 per cent, and fats and oils, 20 per cent.

Meat, poultry and fish provide 15 per cent of our calories, dairy products other than butter, 13 per cent, and eggs, 2 per cent. The remaining 29 per cent is contained in fruits, vegetables, sweeteners and other foods. In addition to supplying food energy, animal products supply us with about 65 per cent of our protein.

Three food groups furnish about 90 per cent of the fat we eat. Food fats and oils, including butter and fat pork cuts, supply 49 per cent. Meat, poultry and fish account for 25 per cent of fat, and dairy products other than butter provide 15 per cent.



# RECENT PUBLICATIONS

*Single copies of the following publications are available free from the Division of Information, MOS, U.S. Department of Agriculture, Washington 25, D.C.*

**MARKETING MARGINS FOR WHITE BREAD.** J. C. Eiland, Marketing Economics Division. Misc. Pub. 712 (Revised November 1962).

Bread prices have risen every year since 1945. Consumers in 1961 paid an average price of 20.9 cents for a 1-pound loaf of bread, 55 percent above the 13.5 cents paid in 1947-49. This report shows the changes in bread prices, margins and costs for those years.

**SWEETENERS USED BY FOOD PROCESSING INDUSTRIES IN THE UNITED STATES.** Roy A. Ballinger and L. C. Larkin, Marketing Economics Division. AER-20.

The canning industry is one of the largest users of sugar and corn sweeteners in the United States. It used 9.6 per cent of sweeteners consumed in the United States in 1961 compared with 7.7 per cent in 1952. This is the first of a group of publications dealing with the use of sweeteners, and their competitive position in the various food industries.

**ADVERTISING PROCEDURES AND PRACTICES OF AGRICULTURAL COMMODITY PROMOTION GROUPS.** Harper W. Boyd, Jr., and Ralph Westfall, Northwestern University, and Robert E. Frye, Marketing Economics Division. MRR-567.

It is estimated that in 1958 some 1,100 farm groups or organizations were engaged in promo-

tion activities, spending about \$75 million annually to maintain the strength of their markets. This is a relatively new field for many groups. This study was made to provide these groups with a broader perspective of administrative processes through which advertising and promotion programs can best be conceived and carried out.

**INDIVIDUAL INCENTIVE PRODS RED CHINA TO CHANGE COMMUNE SYSTEM.** David H. Spaeth, Regional Analysis Division. ERS-Foreign 40.

This report focuses on the procedures, under the current organization of the rural work force in communist China, by which the individual peasant establishes his claim against the aggregate output of the economy. This abstract way of describing the nature of personal income is used since, in the absence of the private ownership of capital, the sources of income in Red China are not comparable with those of the Free World. Included in the report are discussions of the marketing system, the wage system, valuation of labor, and management problems.

**FOOD CONSUMPTION AND EXPENDITURES: INDIA, JAPAN, UNITED STATES.** Lester R. Brown, Regional Analysis Division. ERS-Foreign 42.

Diets in India, Japan, and the United States vary greatly in both quantity and composition. Variations arise from a wide assortment of factors, but they are mainly attributable to differences in income and climate. In Japan, where the economy is expanding at an unparalleled rate and the rate of population increase is quite low, impressive per capita income gains are producing a

rapid rise in the intake of animal products and fruit, while the consumption of starchy foods appears to be declining.

**INDICES OF AGRICULTURAL PRODUCTION FOR THE 20 LATIN AMERICAN COUNTRIES.** Regional Analysis Division. ERS-Foreign 44.

In tabular form, this report presents indices of volume of agricultural and livestock production, and of food production, total and per capita, in Latin America for the years 1957-58 through 1961-62 (preliminary). There also is a table for each country (plus Jamaica and Trinidad) with indices of production of major commodities.

**MILK DISTRIBUTORS' OPERATIONS—ANALYSES OF GROWTH, SALES DISTRIBUTION, COSTS, AND PROFITS.** D. D. MacPherson, Marketing Economics Division. ERS-84.

Beginning in the fall of 1956, the USDA has issued quarterly data on the costs of processing and distributing fluid milk. This report is made up of the special analyses that appeared in the quarterly reports. They are arranged by subject matter rather than in chronological order.

**CUSTOMERS' SHOPPING PATTERNS IN RETAIL STORES: AN EXPLORATORY STUDY.** Nick Havas and Hugh M. Smith, Agricultural Marketing Service. ERS-99.

This is a study of the shopping patterns of 3,200 customers in 13 retail food supermarkets in a northeastern city. It revealed that customers were exposed to about 64 per cent of the store's display locations, spent less than



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23 minutes shopping, made 13 purchases per store visit at an average value of 56 cents per purchase. The report was originally issued in 1960 by the Agricultural Marketing Service. It is now re-issued without change in text by the Marketing Economics Division of ERS.

THE 1963 WORLD AGRICULTURAL SITUATION. Prepared by the Economic Research Service and the Foreign Agricultural Service.

Developments of considerable significance to world and U.S. agriculture occurred in 1962. The estimated rise in agricultural output of about 3 per cent in 1962-63 above the 1961-62 level is only slightly greater than the growth in population, but below the industrial output. As a result of these and other conditions price adjust-

ments occurred in 1962 that were for the most part favorable to agriculture. This report discusses the agricultural situation by commodities and by regions.

STATE WATER-RIGHTS LAWS AND RELATED SUBJECTS: A BIBLIOGRAPHY. Jack R. Turney and Harold H. Ellis, Farm Economics Division. Misc. Pub. No. 921.

The growing interest in laws concerning state water-rights and related subjects has caused state and federal agencies, universities, legislative and executive study committees, and others to prepare a number of publications on the subject. Vitally concerned are public officials charged with administration of water laws and water resource programs. Also interested are courts, lawyers, and farm leaders. This bibliography

was prepared to aid persons searching available literature on state water laws.

THE IMPACT OF TECHNOLOGICAL CHANGE ON MARKETING COSTS AND GROWER'S RETURNS—CASE STUDIES FOR POTATOES, SNAP BEANS, ORANGES, LEMONS. Henry T. Badger, Marketing Economics Division. MRR-573.

Case studies were conducted on potatoes, snap beans, oranges, and lemons retailed in Washington, D. C., in 1959-60 to determine the impact of added processing on prices and marketing costs. Data were collected on the fresh product and at least two processed forms of the product. These data consisted of retail prices; retail, wholesale, packer, and processor gross margins; transportation charges; and returns to growers.